OMRON

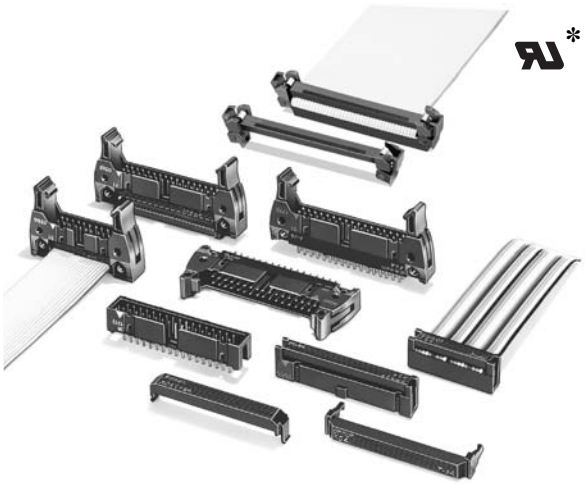
# Flat Cable Connectors

# XG4

## The Mainstream of Circuit Board Connectors conforming MIL Standards with Improved Design.

- Our new production system improves reliability.
- Space-saving Box-type Plugs (XG4C) available.
- IDC Plugs (XG4E) can be used for relaying.
- An endless number of combinations can be made using the XG-5 IDC Connectors for discrete wires, XG8 Original Plugs, and the XG2 IDC Connectors for PCBs.
- The Original Plugs (XG8) and the Box-type Plugs (XG4C) can be locked using Lock Levers.
- Conform to MIL standards (MIL-C-83503).
- UL standards (file No. E103202) (All XG4 models except those with XG4U)

RoHS Compliant



✻ Excluding XG4U

## ■ Terminology

**● MIL standard**

Abbreviation for Military Standard. To unify the compatibility and quality assurance condition of each company, MIL-C-83503 (applicable to connectors) was established in 1977.

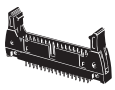
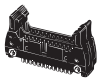
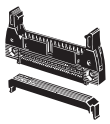
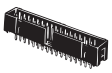
**● Open-end cover**

An open-end cover has a structure where a flat cable can be pulled out from both sides of the cover when a cable is attached to a connector. (The cover having a structure where a flat cable can be pulled out from only one side of the cover is called a "Closed-end cover.")

**● Standoff**

Part provided for lifting the housing from the board (This part improves airflow at the through-hole for better assembly.)

## ■ Ordering Information

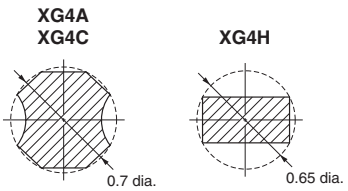
| Model | XG4M<br>XG4M-U | XG4M<br>XG4T | XG4A | XG4A | XG4E<br>XG4S | XG4C | XG4H |
|---|---|---|---|---|---|---|---|
| Appearance | MIL sockets with strain relief (with lock) | MIL sockets with strain relief | MIL plugs  | Plugs with dual ports  | IDC plugs with strain relief  | Box-type plugs  | Board-to-board sockets |
| Page | 3 | 4 | 5 to 10 | 11 to 12 | 13 to 14 | 15 to 16 | 17 to 18 |

## ■ Ratings and Characteristics

| Item | MIL Sockets: XG4M<br>Relay Plug: XG4E | MIL Plugs: XG4A<br>Box-type Plugs: XG4C<br>Board-to-board Sockets: XG4H |
|---|---|---|
| Rated current | 1 A | 3 A (See note 1.) |
| Rated voltage | 250 VAC | 300 VAC |
| Contact resistance | 20 mΩ max. (at 20 mV, 100 mA max.) | |
| Insulation resistance | 1,000 MΩ min. (at 500 VDC) | |
| Dielectric strength | 500 VAC for 1 min (leakage current: 1 mA max.) | |
| Total insertion force | 1.96 N max. per contact | |
| Removal force | 0.39 N min. (with test gauge, t= 0.64 mm) | |
| Insertion durability | 50 times | |
| Ambient operating temperature | –55 to 105°C (with no icing at low temperature) | |

**Note:** **1.** The rated current will depend on the Socket you are using. It is 1 A using the XG4M for example.

## ■ Cross-sectional View of Terminal



## ■ Materials and Finish

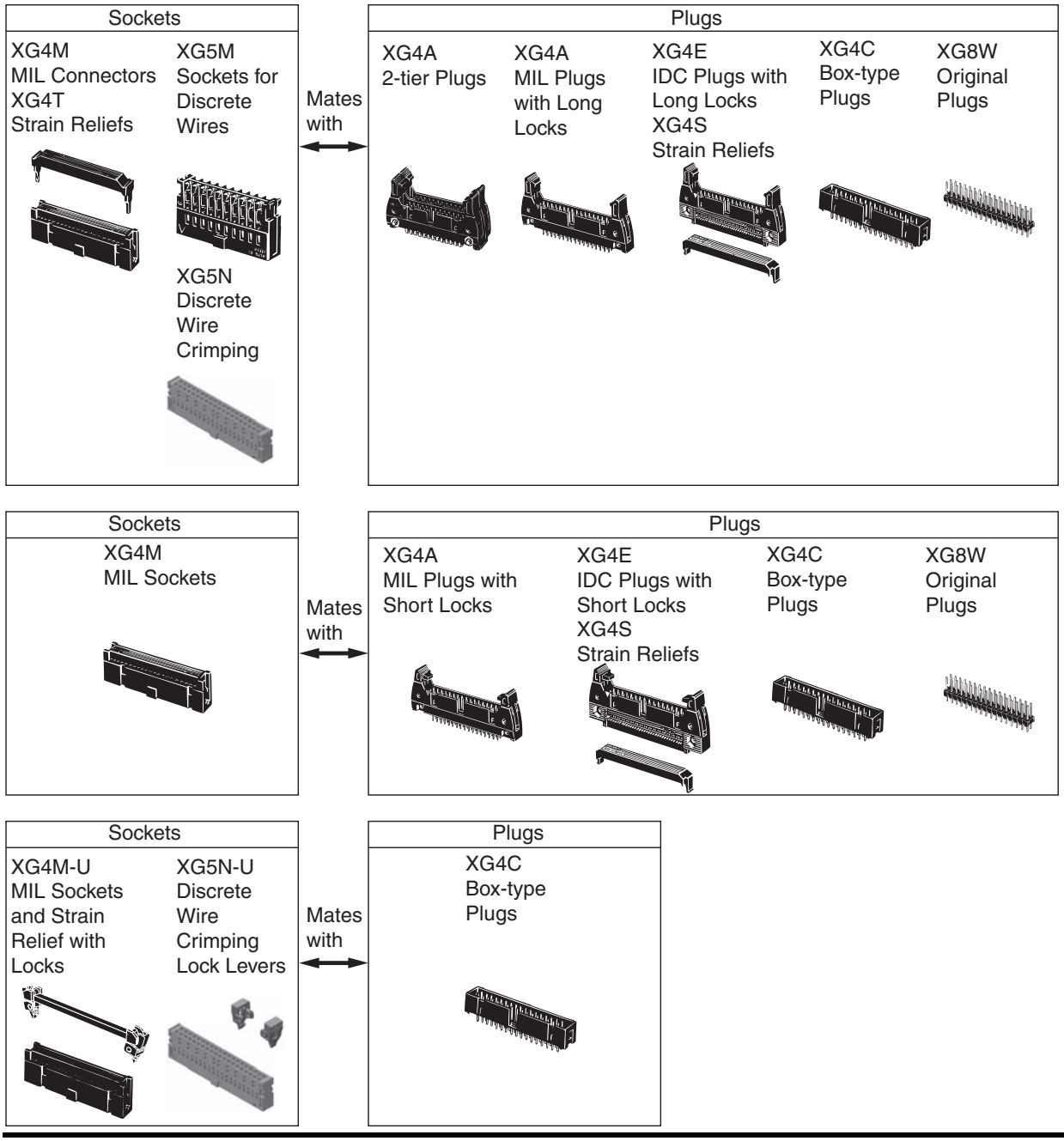
| Item | | MIL Plugs: XG4A<br>Box-type Plugs: XG4C | IDC Plugs: XG4E<br>(Strain Relief: XG4S) | MIL Sockets: XG4M<br>(Strain Relief: XG4T) | Board-to-board<br>Sockets: XG4H |
|---|---|---|---|---|---|
| Housings | | Fiber-glass reinforced PBT resin (UL94 V-0)/black | | | |
| Covers | | --- | Polyamide resin (UL94 V-0)/ black | Fiber-glass reinforced PBT resin (UL94 V-0)/black | --- |
| Contacts | Mating end | Brass/nickel base, 0.15-μm gold plating | Phosphor bronze/nickel base, 0.15-μm gold plating | | |
| | Terminal Press fit | Brass/nickel base, 2.0-μm tin plating | Phosphor bronze/nickel base, 2.0-μm tin plating | | |
| Strain Reliefs | | --- | Polyamide resin (UL94 V-0)/ black | Fiber-glass reinforced PBT resin (UL94 V-0)/black | --- |

## ■ Applicable Wires

**For pressing**

1.27-mm pitch flat cable incorporating AWG28 wires
- UL2651(standard cable)
- UL20012 (folding cable)
- UL20028 (color-code cable)

## ■ Mating Combinations for XG4 and XG5

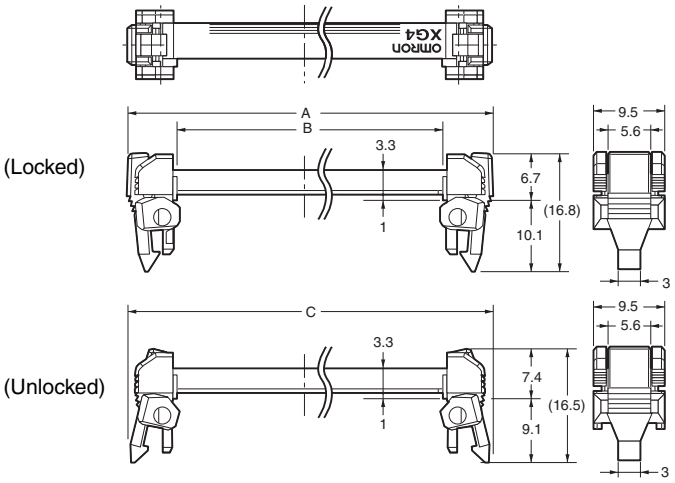


# XG4M-U MIL Connectors with Socket Locks

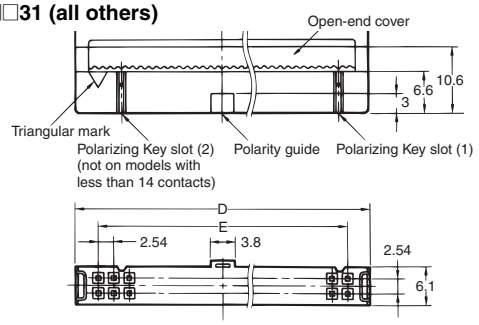
## ■ Dimensions

(Unit: mm)

**XG4U**
**Strain Reliefs with Locks**

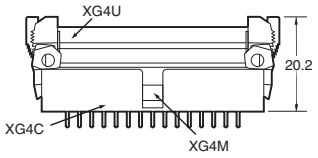



**XG4M-□□30 (one polarity guide)**
**XG4M-□□31 (all others)**

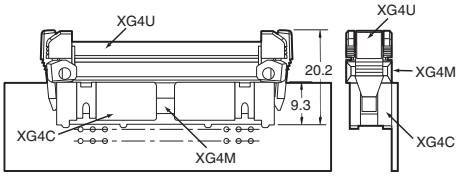



## ■ Mating Diagrams for XG4M

**XG4U + XG4M + XG4C (with straight terminals)**



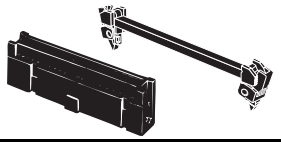
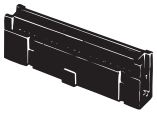
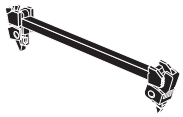

**XG4U + XG4M + XG4C (with right-angle terminals)**




**Dimensions**

| No. of contacts | Dimensions (mm) | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| 10 | 26.8 | 13.2 | 26.2 | 17.3 | 10.16 |
| 14 | 31.8 | 18.2 | 31.2 | 22.3 | 15.24 |
| 16 | 34.4 | 20.8 | 33.8 | 24.9 | 17.78 |
| 20 | 39.5 | 25.9 | 38.9 | 30.0 | 22.86 |
| 26 | 47.1 | 33.5 | 46.5 | 37.6 | 30.48 |
| 30 | 52.2 | 38.6 | 51.6 | 42.7 | 35.56 |
| 34 | 57.2 | 43.6 | 56.6 | 47.7 | 40.64 |
| 40 | 64.9 | 51.3 | 64.3 | 55.4 | 48.26 |
| 50 | 77.6 | 64.0 | 77.0 | 68.1 | 60.96 |
| 60 | 90.3 | 76.7 | 89.7 | 80.8 | 73.66 |
| 64 | 95.3 | 81.7 | 94.7 | 85.8 | 78.74 |

## ■ Ordering Information

| No. of contacts | No. of polarity guides | Socket and Strain Relief Sets (See note 1.)  | Socket with Open-end Cover (See note 2.)  | Strain Relief with Locks  |
|---|---|---|---|---|
| 10 | 0 | XG4M-1031-U | XG4M-1031 | XG4U-1004 |
| | 1 | XG4M-1030-U | XG4M-1030 | |
| 14 | 1 | XG4M-1430-U | XG4M-1430 | XG4U-1404 |
| 16 | 1 | XG4M-1630-U | XG4M-1630 | XG4U-1604 |
| 20 | 1 | XG4M-2030-U | XG4M-2030 | XG4U-2004 |
| 26 | 1 | XG4M-2630-U | XG4M-2630 | XG4U-2604 |
| 30 | 1 | XG4M-3030-U | XG4M-3030 | XG4U-3004 |
| 34 | 1 | XG4M-3430-U | XG4M-3430 | XG4U-3404 |
| 40 | 1 | XG4M-4030-U | XG4M-4030 | XG4U-4004 |
| 50 | 1 | XG4M-5030-U | XG4M-5030 | XG4U-5004 |
| | 2 (See note 3.) | XG4M-5031-U | XG4M-5031 | |
| 60 | 1 | XG4M-6030-U | XG4M-6030 | XG4U-6004 |
| | 2 (See note 3.) | XG4M-6031-U | XG4M-6031 | |
| 64 | 1 | XG4M-6430-U | XG4M-6430 | XG4U-6404 |
| | 2 (See note 3.) | XG4M-6431-U | XG4M-6431 | |

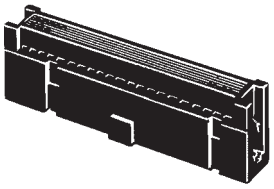
**Note: 1.** With open-end cover.
**2.** Strain Relief sold separately.
**3.** Polarity guide pitch is 22.86 mm.

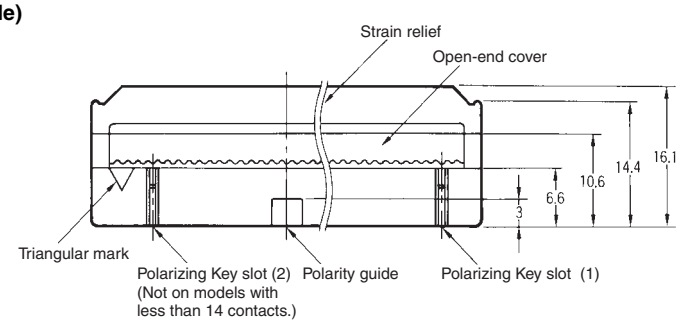
# XG4M MIL Sockets

## ■ Dimensions

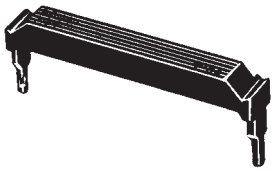
(Unit: mm)

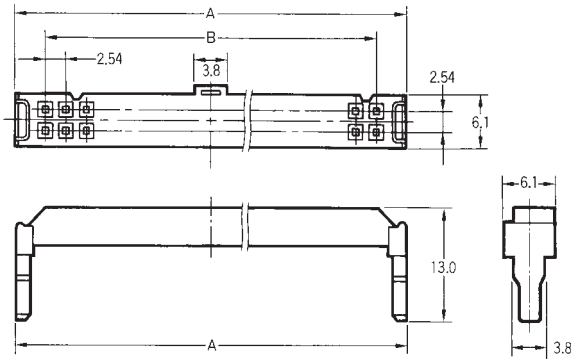
**XG4M-□□30 (one polarizing guide)**
**XG4M-□□31 (all others)**






**XG4T-□□04**
**Strain Relief**



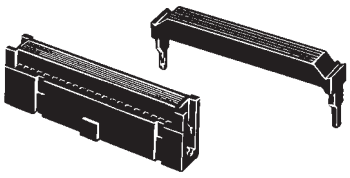
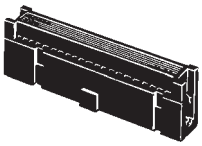
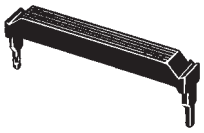



**Dimensions**

| No. of contacts | Dimensions (mm) | |
|---|---|---|
| | A | B |
| 10 | 17.3 | 10.16 |
| 14 | 22.3 | 15.24 |
| 16 | 24.9 | 17.78 |
| 20 | 30.0 | 22.86 |
| 26 | 37.6 | 30.48 |
| 30 | 42.7 | 35.56 |
| 34 | 47.7 | 40.64 |
| 40 | 55.4 | 48.26 |
| 50 | 68.1 | 60.96 |
| 60 | 80.8 | 73.66 |
| 64 | 85.8 | 78.74 |

**XG4M-□□30-T (XG4M-□□30 + XG4T-□□04)**
**XG4M-□□31-T (XG4M-□□31 + XG4T-□□04)**
**MIL Socket and Strain Relief Sets**

## ■ Ordering Information

| No. of contacts | No. of polarity guides | Socket and Strain Relief Set (See note 1.)  | Socket with Open-end Cover (See note 2.)  | Strain Relief for the XG4M  |
|---|---|---|---|---|
| 10 | 0 | XG4M-1031-T | XG4M-1031 | XG4T-1004 |
| | 1 | XG4M-1030-T | XG4M-1030 | |
| 14 | 1 | XG4M-1430-T | XG4M-1430 | XG4T-1404 |
| 16 | 1 | XG4M-1630-T | XG4M-1630 | XG4T-1604 |
| 20 | 1 | XG4M-2030-T | XG4M-2030 | XG4T-2004 |
| 26 | 1 | XG4M-2630-T | XG4M-2630 | XG4T-2604 |
| 30 | 1 | XG4M-3030-T | XG4M-3030 | XG4T-3004 |
| 34 | 1 | XG4M-3430-T | XG4M-3430 | XG4T-3404 |
| 40 | 1 | XG4M-4030-T | XG4M-4030 | XG4T-4004 |
| 50 | 1 | XG4M-5030-T | XG4M-5030 | XG4T-5004 |
| | 2 (See note 3.) | XG4M-5031-T | XG4M-5031 | |
| 60 | 1 | XG4M-6030-T | XG4M-6030 | XG4T-6004 |
| | 2 (See note 3.) | XG4M-6031-T | XG4M-6031 | |
| 64 | 1 | XG4M-6430-T | XG4M-6430 | XG4T-6404 |
| | 2 (See note 3.) | XG4M-6431-T | XG4M-6431 | |

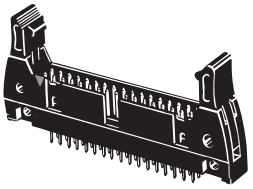
**Note: 1.** With open-end cover.
**2.** Strain Relief sold separately.
**3.** Polarity guide pitch is 22.86 mm

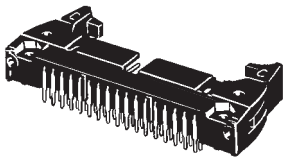
# XG4A MIL Plugs with Long Locks (MIL Standards)

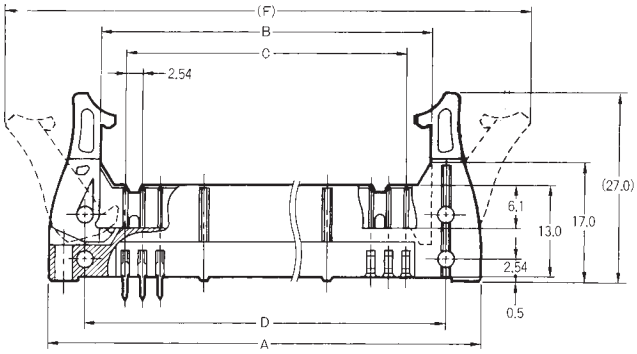
## ■ Dimensions

(Unit: mm)

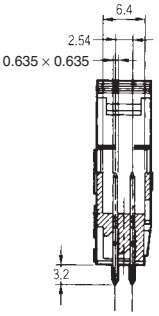
**XG4A-□□31/-□□71 (With straight DIP terminals)**
**XG4A-□□34/-□□74 (With right-angle DIP terminals)**



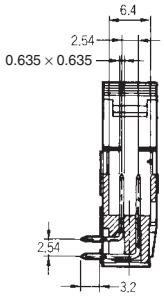




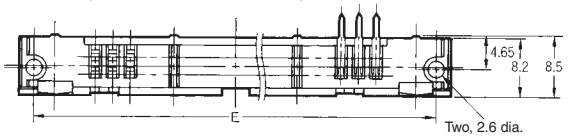

Straight DIP terminals



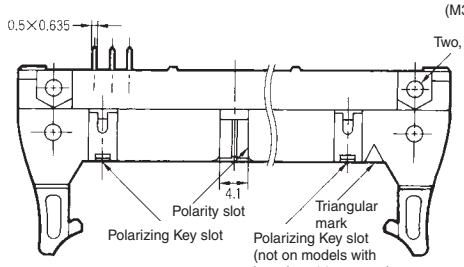

Right-angle DIP terminals



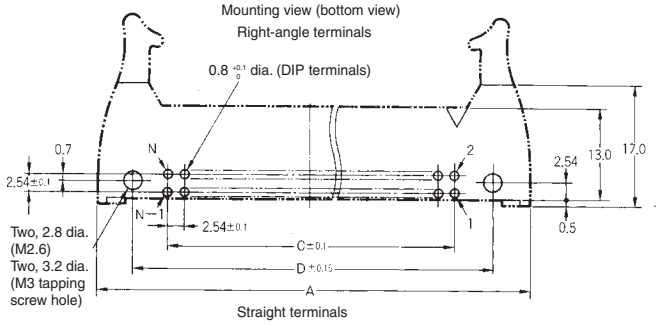

Straight DIP terminals Right-angle DIP terminals



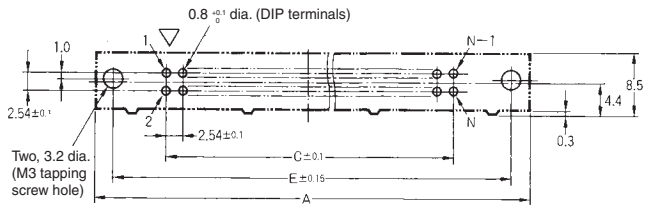

Two, 2.6 dia.
(M3 tapping screw hole)




Mounting view (bottom view)
Right-angle terminals




Straight terminals



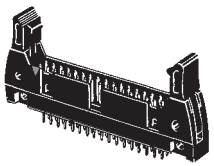
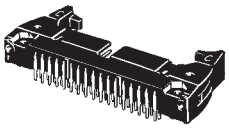

### Dimensions

| No. of contacts | Dimensions (mm) | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| 10 | 32.0 | 17.5 | 10.16 | 21.8 | 27.9 | 46.4 |
| 14 | 37.1 | 22.6 | 15.24 | 26.9 | 33.0 | 51.5 |
| 16 | 39.6 | 25.2 | 17.78 | 29.5 | 35.6 | 54.1 |
| 20 | 44.7 | 30.2 | 22.86 | 34.5 | 40.6 | 59.1 |
| 26 | 52.3 | 37.9 | 30.48 | 42.2 | 48.3 | 66.8 |
| 30 | 57.4 | 42.9 | 35.56 | 47.2 | 53.3 | 71.8 |
| 34 | 62.5 | 48.0 | 40.64 | 52.3 | 58.4 | 76.9 |
| 40 | 70.1 | 55.6 | 48.26 | 59.9 | 66.0 | 84.5 |
| 50 | 82.8 | 68.3 | 60.96 | 72.6 | 78.7 | 97.2 |
| 60 | 95.5 | 81.0 | 73.66 | 85.3 | 91.4 | 109.9 |
| 64 | 100.6 | 86.1 | 78.74 | 90.4 | 96.5 | 115.0 |

**Note:** See page 16 for details on the availability (10-contact Connectors) and pitch (with 50, 60, or 64-contact Connectors) of polarity slots.

## ■ Ordering Information

Use in Combination with Strain-relief Sockets.

| No. of contacts | No. of polarizing slots | Plugs with straight DIP terminals  | Plugs with right-angle DIP terminals  |
|---|---|---|---|
| 10 | 0 | XG4A-1071 | XG4A-1074 |
| | 1 | XG4A-1031 | XG4A-1034 |
| 14 | 1 | XG4A-1431 | XG4A-1434 |
| 16 | 1 | XG4A-1631 | XG4A-1634 |
| 20 | 1 | XG4A-2031 | XG4A-2034 |
| 26 | 1 | XG4A-2631 | XG4A-2634 |
| 30 | 1 | XG4A-3031 | XG4A-3034 |
| 34 | 1 | XG4A-3431 | XG4A-3434 |
| 40 | 1 | XG4A-4031 | XG4A-4034 |
| 50 | 1 | XG4A-5031 | XG4A-5034 |
| | 2 (See note.) | XG4A-5071 | XG4A-5074 |
| 60 | 1 | XG4A-6031 | XG4A-6034 |
| | 2 (See note.) | XG4A-6071 | XG4A-6074 |
| 64 | 1 | XG4A-6431 | XG4A-6434 |
| | 2 (See note.) | XG4A-6471 | XG4A-6474 |

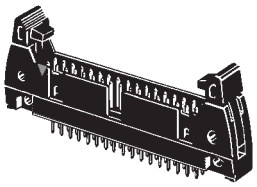
**Note:** Polarizing slot pitch is 22.86 mm.

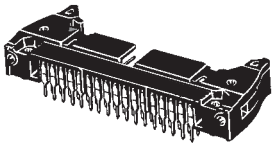
# XG4A MIL Plugs with Short Locks

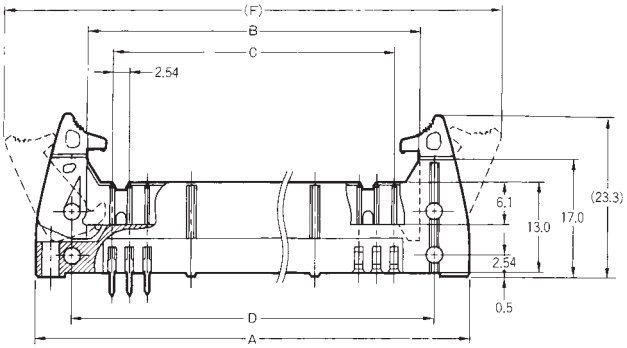
## ■ Dimensions

(Unit: mm)

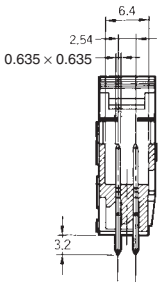
**XG4A-□□32/-□□72 (With straight DIP terminals)**
**XG4A-□□35/-□□75 (With right-angle DIP terminals)**



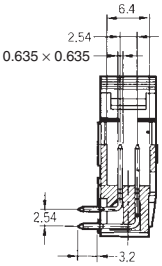




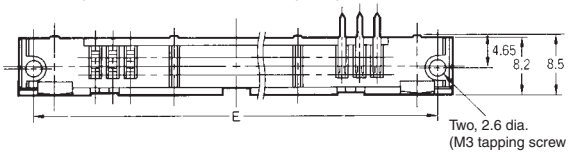

Straight DIP terminals

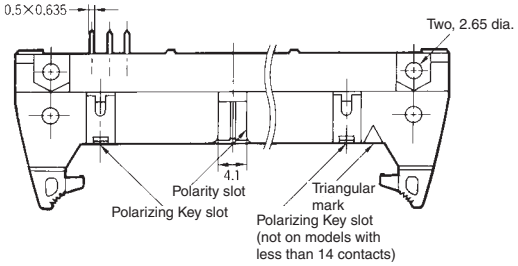



Right-angle DIP terminals

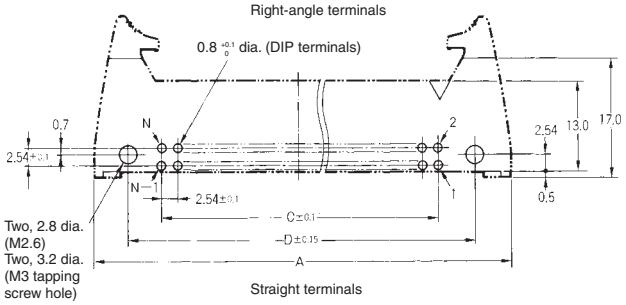



Straight DIP terminals Right-angle DIP terminals

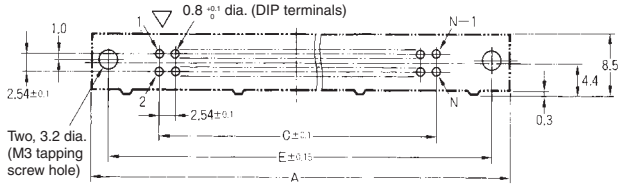



Mounting holes (bottom view)
Right-angle terminals




Straight terminals



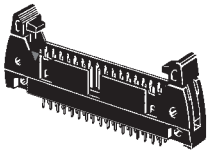
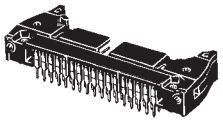

### Dimensions

| No. of contacts | Dimensions (mm) | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| 10 | 32.0 | 17.5 | 10.16 | 21.8 | 27.9 | 40.4 |
| 14 | 37.1 | 22.6 | 15.24 | 26.9 | 33.0 | 45.5 |
| 16 | 39.6 | 25.2 | 17.78 | 29.5 | 35.6 | 48.0 |
| 20 | 44.7 | 30.2 | 22.86 | 34.5 | 40.6 | 53.1 |
| 26 | 52.3 | 37.9 | 30.48 | 42.2 | 48.3 | 60.7 |
| 30 | 57.4 | 42.9 | 35.56 | 47.2 | 53.3 | 65.8 |
| 34 | 62.5 | 48.0 | 40.64 | 52.3 | 58.4 | 70.9 |
| 40 | 70.1 | 55.6 | 48.26 | 59.9 | 66.0 | 78.5 |
| 50 | 82.8 | 68.3 | 60.96 | 72.6 | 78.7 | 91.2 |
| 60 | 95.5 | 81.0 | 73.66 | 85.3 | 91.4 | 103.9 |
| 64 | 100.6 | 86.1 | 78.74 | 90.4 | 96.5 | 109.0 |

**Note:** See page 16 for details on the availability (10-contact Connectors) and pitch (with 50, 60, or 64-contact Connectors) of polarity slots.

## ■ Ordering Information

Use in combination with sockets without strain-relief.

| No. of contacts | No. of polarizing slots | Plugs with straight DIP terminals  | Plugs with right-angle DIP terminals  |
|---|---|---|---|
| 10 | 0 | XG4A-1072 | XG4A-1075 |
| | 1 | XG4A-1032 | XG4A-1035 |
| 14 | 1 | XG4A-1432 | XG4A-1435 |
| 16 | 1 | XG4A-1632 | XG4A-1635 |
| 20 | 1 | XG4A-2032 | XG4A-2035 |
| 26 | 1 | XG4A-2632 | XG4A-2635 |
| 30 | 1 | XG4A-3032 | XG4A-3035 |
| 34 | 1 | XG4A-3432 | XG4A-3435 |
| 40 | 1 | XG4A-4032 | XG4A-4035 |
| 50 | 1 | XG4A-5032 | XG4A-5035 |
| | 2 (See note.) | XG4A-5072 | XG4A-5075 |
| 60 | 1 | XG4A-6032 | XG4A-6035 |
| | 2 (See note.) | XG4A-6072 | XG4A-6075 |
| 64 | 1 | XG4A-6432 | XG4A-6435 |
| | 2 (See note.) | XG4A-6472 | XG4A-6475 |

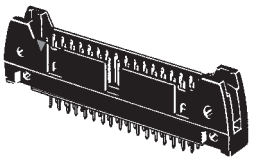
**Note:** Polarizing slot pitch is 22.86 mm.

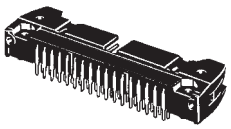
# XG4A MIL Plugs without Lock Levers (Lock Levers mounted later)

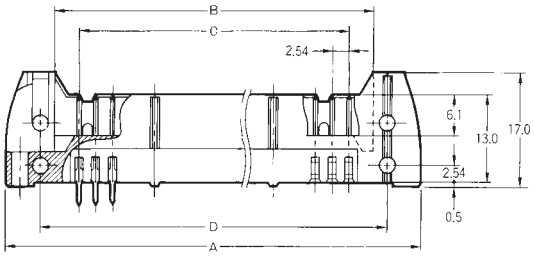
## ■ Dimensions

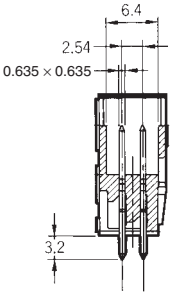
(Unit: mm)

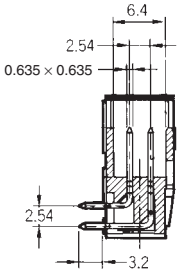
**XG4A-□□33/-□□73 (With straight DIP terminals)**
**XG4A-□□36/-□□76 (With right-angle DIP terminals)**

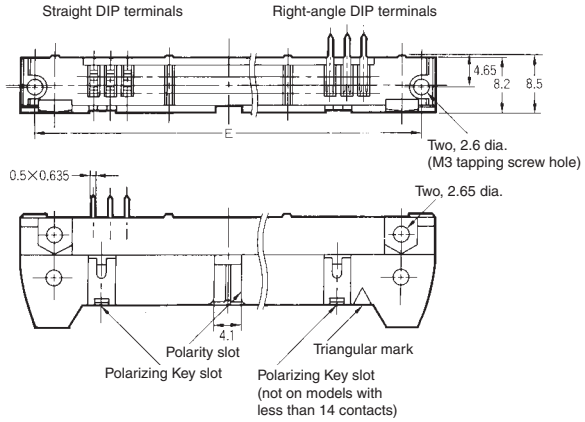


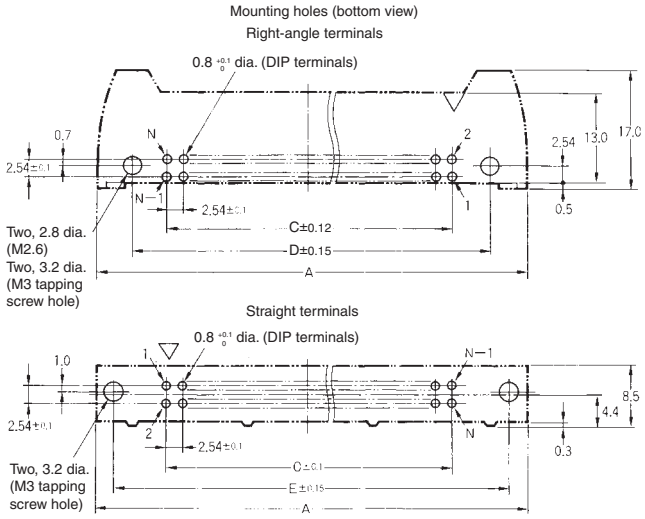




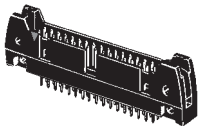
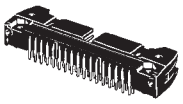




### Dimensions

| No. of contacts | Dimensions (mm) | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| 10 | 32.0 | 17.5 | 10.16 | 21.8 | 27.9 |
| 14 | 37.1 | 22.6 | 15.24 | 26.9 | 33.0 |
| 16 | 39.6 | 25.2 | 17.78 | 29.5 | 35.6 |
| 20 | 44.7 | 30.2 | 22.86 | 34.5 | 40.6 |
| 26 | 52.3 | 37.9 | 30.48 | 42.2 | 48.3 |
| 30 | 57.4 | 42.9 | 35.56 | 47.2 | 53.3 |
| 34 | 62.5 | 48.0 | 40.64 | 52.3 | 58.4 |
| 40 | 70.1 | 55.6 | 48.26 | 59.9 | 66.0 |
| 50 | 82.8 | 68.3 | 60.96 | 72.6 | 78.7 |
| 60 | 95.5 | 81.0 | 73.66 | 85.3 | 91.4 |
| 64 | 100.6 | 86.1 | 78.74 | 90.4 | 96.5 |

**Note:** See page 16 for details on the availability (10-contact Connectors) and pitch (with 50, 60, or 64-contact Connectors) of polarizing slots.

## ■ Ordering Information

| No. of contacts | No. of polarizing slots | Plugs with straight DIP terminals  | Plugs right-angle DIP terminals  |
|---|---|---|---|
| 10 | 0 | XG4A-1073 | XG4A-1076 |
| | 1 | XG4A-1033 | XG4A-1036 |
| 14 | 1 | XG4A-1433 | XG4A-1436 |
| 16 | 1 | XG4A-1633 | XG4A-1636 |
| 20 | 1 | XG4A-2033 | XG4A-2036 |
| 26 | 1 | XG4A-2633 | XG4A-2636 |
| 30 | 1 | XG4A-3033 | XG4A-3036 |
| 34 | 1 | XG4A-3433 | XG4A-3436 |
| 40 | 1 | XG4A-4033 | XG4A-4036 |
| 50 | 1 | XG4A-5033 | XG4A-5036 |
| | 2 (See note.) | XG4A-5073 | XG4A-5076 |
| 60 | 1 | XG4A-6033 | XG4A-6036 |
| | 2 (See note.) | XG4A-6073 | XG4A-6076 |
| 64 | 1 | XG4A-6433 | XG4A-6436 |
| | 2 (See note.) | XG4A-6473 | XG4A-6476 |

**Note:** Polarity slot pitch is 22.86 mm.

## Lock Levers

- This series of Connectors allows you to attach Lock Levers on Right-angle Terminal Plugs after automated soldering is completed.
- Lock Levers can be easily mounted simply by manually pushing them in.

XG4Z-0010
Long Lock Lever

XG4Z-0011
Short Lock Lever

| Type | Model |
|---|---|
| **Long Lock Levers** | **XG4Z-0010** |
| **Short Lock Levers** | **XG4Z-0011** |

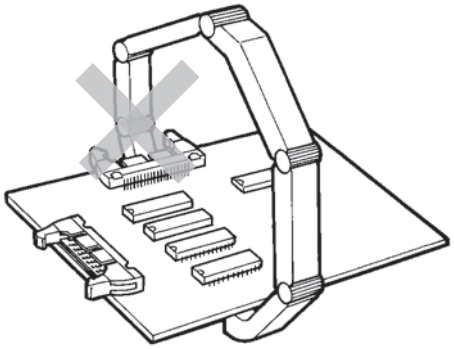
**Note:** The left and right Lock Levers are identical. One pair is needed for each Plug.

### Attachment after Soldering

- Long Levers interfere with automated mounting.
- Long Levers are in the way when boards are packed.

↓

- These problems are resolved using Connectors with Long Levers that can be attached after soldering is completed.

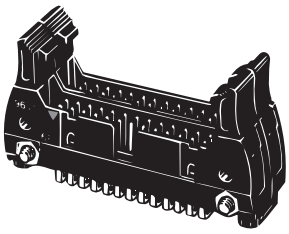


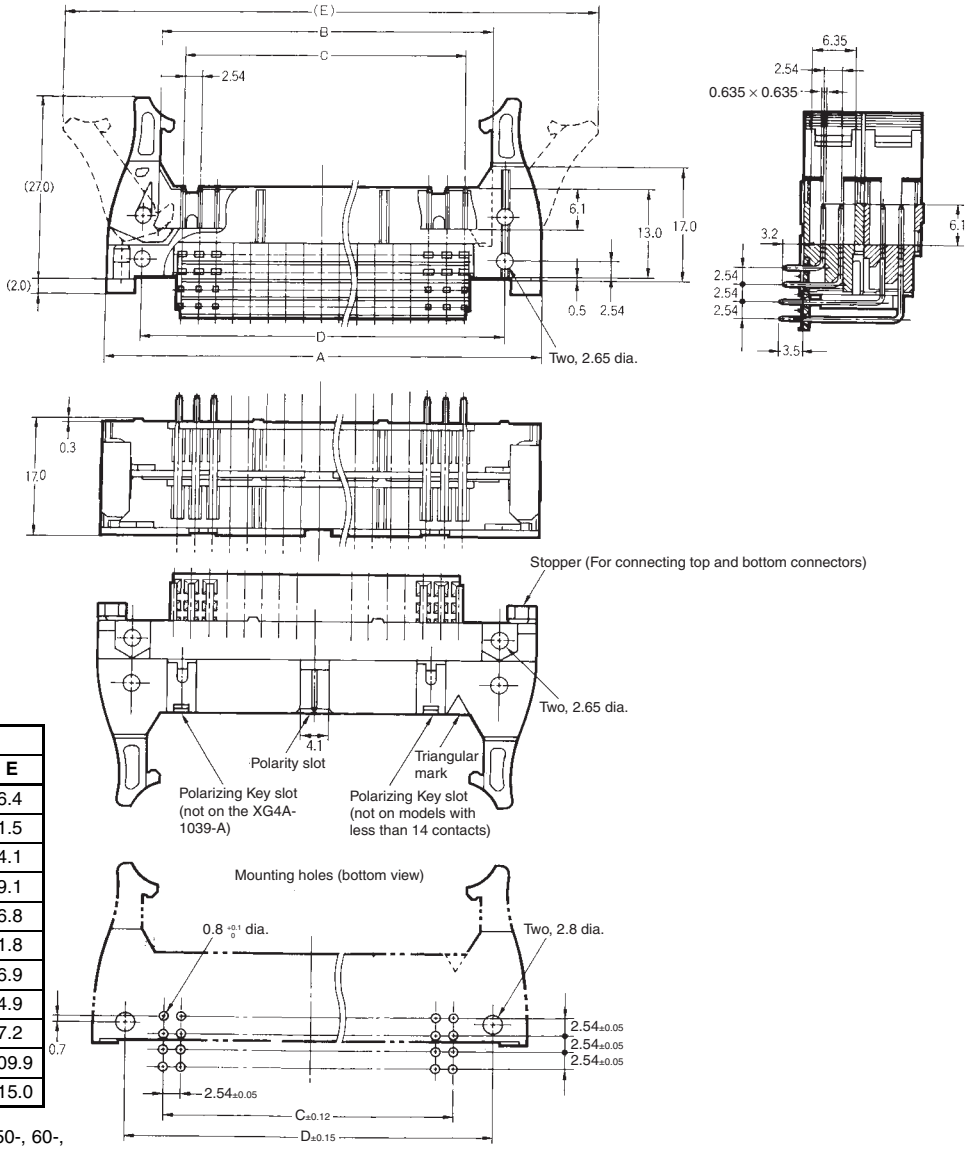
# XG4A 2-tier Plugs with Long Lock

## ■ Dimensions

(Unit: mm)

**XG4A-□□39-A/-□□79-A**
**(With long locks and right-angle DIP terminals)**






### Dimensions

| No. of contacts | Dimensions (mm) | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| 10 × 2 | 32.0 | 17.5 | 10.16 | 21.8 | 46.4 |
| 14 × 2 | 37.1 | 22.6 | 15.24 | 26.9 | 51.5 |
| 16 × 2 | 39.6 | 25.2 | 17.78 | 29.5 | 54.1 |
| 20 × 2 | 44.7 | 30.2 | 22.86 | 34.5 | 59.1 |
| 26 × 2 | 52.3 | 37.9 | 30.48 | 42.2 | 66.8 |
| 30 × 2 | 57.4 | 42.9 | 35.56 | 47.2 | 71.8 |
| 34 × 2 | 62.5 | 48.0 | 40.64 | 52.3 | 76.9 |
| 40 × 2 | 70.1 | 55.6 | 48.26 | 59.9 | 84.9 |
| 50 × 2 | 82.8 | 68.3 | 60.96 | 72.6 | 97.2 |
| 60 × 2 | 95.5 | 81.0 | 73.66 | 85.3 | 109.9 |
| 64 × 2 | 100.6 | 86.1 | 78.74 | 90.4 | 115.0 |

**Note:** Polarizing slot pitch is 22.86 mm for 50-, 60-, and 64-contact Connectors.

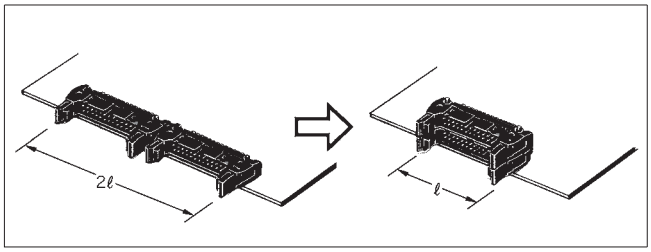
## ■ Ordering Information

| No. of contacts | No. of polarizing slots | Model | No. of contacts | No. of polarity slots | Model |
|---|---|---|---|---|---|
| **10 × 2** | 0 | XG4A-1079-A | 40 × 2 | 1 | XG4A-4039-A |
| | 1 | XG4A-1039-A | | | |
| **14 × 2** | 1 | XG4A-1439-A | 50 × 2 | 1 | XG4A-5039-A |
| **16 × 2** | 1 | XG4A-1639-A | | 2 (See note 2.) | XG4A-5079-A |
| **20 × 2** | 1 | XG4A-2039-A | 60 × 2 | 1 | XG4A-6039-A |
| **26 × 2** | 1 | XG4A-2639-A | | 2 (See note 2.) | XG4A-6079-A |
| **30 × 2** | 1 | XG4A-3039-A | 64 × 2 | 1 | XG4A-6439-A |
| **34 × 2** | 1 | XG4A-3439-A | | 2 (See note 2.) | XG4A-6479-A |

**Note: 1.** Set containing a stopper, mounting screw (assembled with washer) and nut.
Screw size: M2.6 x 20 mm

**2.** Polarizing slot pitch is 22.86 mm.

## ■ Mounting Example




## ■ 2-tier Plug Features

- Recommended for high-density mounting.
- MIL-compliant cable ensures faster delivery times and lower cost than half-pitch board cable. The 2.54-mm pitch simplifies patterning.

## ■ Applicable Sockets

| No. of contacts | No. of polarity slots | Model | XG4M for flat cable (See note 1.) | XG5M-N for discrete wire (See note 2.) |
|---|---|---|---|---|
| 10 × 2 | 0 | XG4A-1079-A | XG4M-1031 | XG5M-103□-N |
| | 1 | XG4A-1039-A | XG4M-1030 | XG5M-103□-N |
| 14 × 2 | 1 | XG4A-1439-A | XG4M-1430 | XG5M-143□-N |
| 16 × 2 | 1 | XG4A-1639-A | XG4M-1630 | XG5M-163□-N |
| 20 × 2 | 1 | XG4A-2039-A | XG4M-2030 | XG5M-203□-N |
| 26 × 2 | 1 | XG4A-2639-A | XG4M-2630 | XG5M-263□-N |
| 30 × 2 | 1 | XG4A-3039-A | XG4M-3030 | XG5M-303□-N |
| 34 × 2 | 1 | XG4A-3439-A | XG4M-3430 | XG5M-343□-N |
| 40 × 2 | 1 | XG4A-4039-A | XG4M-4030 | XG5M-403□-N |
| 50 × 2 | 1 | XG4A-5039-A | XG4M-5030 | XG5M-503□-N |
| | 2 (See note 3.) | XG4A-5079-A | XG4M-5031 | |
| 60 × 2 | 1 | XG4A-6039-A | XG4M-6030 | XG5M-603□-N |
| | 2 (See note 3.) | XG4A-6079-A | XG4M-6031 | |
| 64 × 2 | 1 | XG4A-6439-A | XG4M-6430 | XG5M-643□-N |
| | 2 (See note 3.) | XG4A-6479-A | XG4M-6431 | |

**Note: 1.** Use with the supplied Strain Relief.
**2.** Use with the supplied Semi-cover. Hood Cover cannot be used.
**3.** Polarity slot pitch is 22.86 mm.

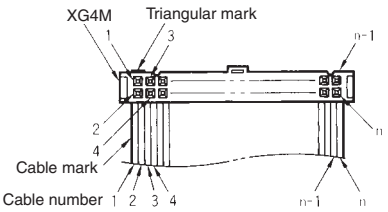
## ■ Cable Number and Contact Position

**Cable and Corresponding Contact Number**

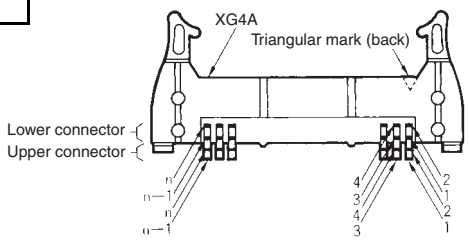
The contact numbers are not marked on the Connector. Use the triangular mark as a guide when wiring and designing circuit boards.

For the cable number, count starting from the cable mark side as shown below.

Socket (mating side)




Right-angle terminals (terminal side)




## ■ Precautions

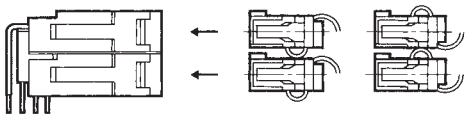
### Correct Use

#### Mounting

- Be sure to anchor the board with screws before mounting.
- Note that a Polarizing Key cannot be mounted on the lower Plug.

#### Connecting the Socket

- Before connecting the XG4M with Strain Relief, remove as much slack from the cable as possible. Insert as shown below.
- Attach the Semi-cover before connecting the XG5M-N. It is not possible to use the Hood Cover.



#### Soldering

- **Automated Soldering Conditions (Jet Flow)**

**1.** Soldering temperature: 250 ±5°C
**2.** Continuous soldering time: Within 5 ± 1 s

#### Lock Lever Operation

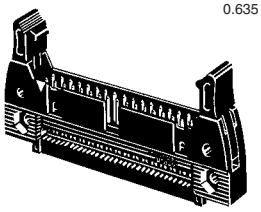
When you operate the lock lever, do not force it past the movable range.
The connector may be damaged.
Do not use any type of tool to operate the lock lever. Operate it only with your hand.
The connector may be damaged.
Always release the lock mechanism before you disconnect the connector from the connected socket.
The connector may be damaged.

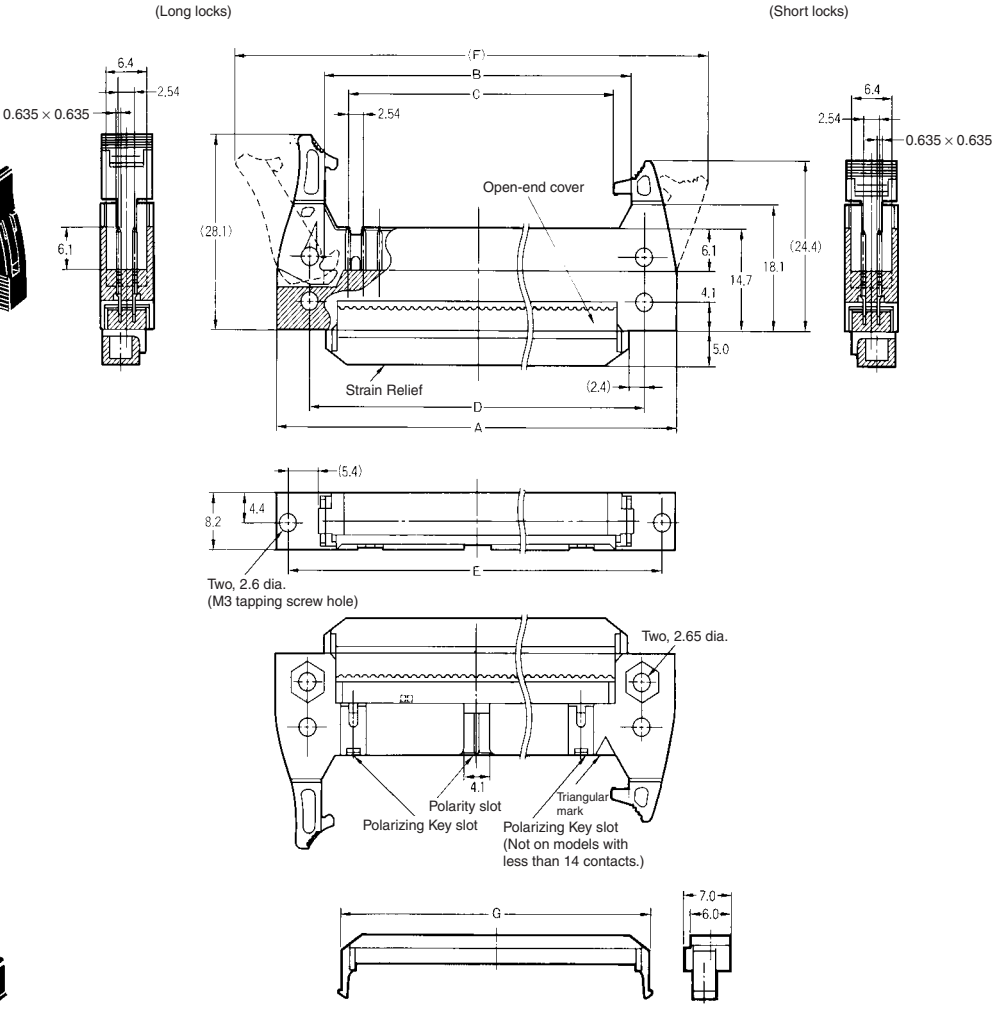
# XG4E IDC Plugs

## ■ Dimensions

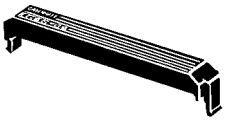
(Unit: mm)

**XG4E-□□31/-□□71**
**(With long locks)**
**XG4E-□□32/-□□72**
**(With short locks)**






**XG4S-□□04**
**Strain Relief**



**Dimensions**

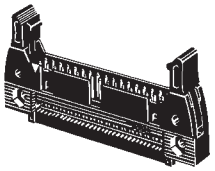
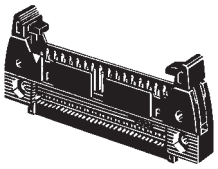
| No. of contacts | Dimensions (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | | G |
| | | | | | | Long Lock | Short Lock | |
| 10 | 32.0 | 17.5 | 10.16 | 21.8 | 27.9 | 46.4 | 40.4 | 16.9 |
| 14 | 37.1 | 22.6 | 15.24 | 26.9 | 33.0 | 51.5 | 45.5 | 22.0 |
| 16 | 39.6 | 25.2 | 17.78 | 29.5 | 35.6 | 54.1 | 48.0 | 24.6 |
| 20 | 44.7 | 30.2 | 22.86 | 34.5 | 40.6 | 59.1 | 53.1 | 29.6 |
| 26 | 52.3 | 37.9 | 30.48 | 42.2 | 48.3 | 66.8 | 60.7 | 38.0 |
| 30 | 57.4 | 42.9 | 35.56 | 47.2 | 53.3 | 71.8 | 65.8 | 42.3 |
| 34 | 62.5 | 48.0 | 40.64 | 52.3 | 58.4 | 76.9 | 70.9 | 47.4 |
| 40 | 70.1 | 55.6 | 48.26 | 59.9 | 66.0 | 84.5 | 78.5 | 55.0 |
| 50 | 82.8 | 68.3 | 60.96 | 72.6 | 78.7 | 97.2 | 91.2 | 67.7 |
| 60 | 95.5 | 81.0 | 73.66 | 85.3 | 91.4 | 109.9 | 103.9 | 80.4 |
| 64 | 100.6 | 86.1 | 78.74 | 90.4 | 96.5 | 115.0 | 109.0 | 85.5 |

**Note:** See the following page for details on the availability (10-contact Connectors) and pitch (with 50, 60, or 64-contact Connectors) of polarity slots.

# ■ Ordering Information

## IDC Plugs

Use Long-lock Plugs together with Strain-relief Sockets, and use Short-lock Plugs together with Non-strain-relief Sockets.

| No. of contacts | No. of polarizing slots | Long-lock Plugs with Open-end Covers (See note 1.)  | Short-lock Plugs with Open-end Covers (See note 1.)  | Strain Reliefs for XG4E |
|---|---|---|---|---|
| 10 | 0 | XG4E-1071 | XG4E-1072 | XG4S-1004 |
| | 1 | XG4E-1031 | XG4E-1032 | |
| 14 | 1 | XG4E-1431 | XG4E-1432 | XG4S-1404 |
| 16 | 1 | XG4E-1631 | XG4E-1632 | XG4S-1604 |
| 20 | 1 | XG4E-2031 | XG4E-2032 | XG4S-2004 |
| 26 | 1 | XG4E-2631 | XG4E-2632 | XG4S-2604 |
| 30 | 1 | XG4E-3031 | XG4E-3032 | XG4S-3004 |
| 34 | 1 | XG4E-3431 | XG4E-3432 | XG4S-3404 |
| 40 | 1 | XG4E-4031 | XG4E-4032 | XG4S-4004 |
| 50 | 1 | XG4E-5031 | XG4E-5032 | XG4S-5004 |
| | 2 (See note 2.) | XG4E-5071 | XG4E-5072 | |
| 60 | 1 | XG4E-6031 | XG4E-6032 | XG4S-6004 |
| | 2 (See note 2.) | XG4E-6071 | XG4E-6072 | |
| 64 | 1 | XG4E-6431 | XG4E-6432 | XG4S-6404 |
| | 2 (See note 2.) | XG4E-6471 | XG4E-6472 | |

**Note: 1.** Strain Relief sold separately.
**2.** Polarity slot pitch is 22.86 mm.

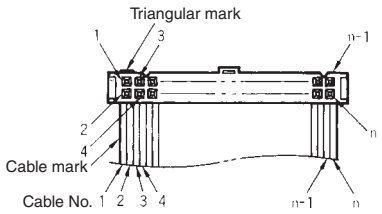
## ■ Cable Number and Contact Position

### Cable and Corresponding Contact Number

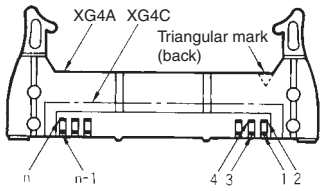
The contact numbers are not marked on the Connector. Use the triangular mark as a guide when wiring and designing circuit boards.

For the cable number, count starting from the cable mark side as shown on the right.

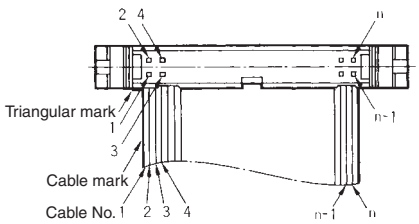
Socket (mated side)



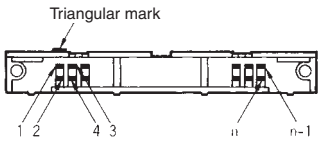

Right-angle Terminal Plug (terminal side)




Plug (XG4E)




Straight Terminal Plug (terminal side)

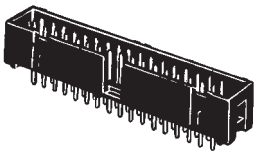


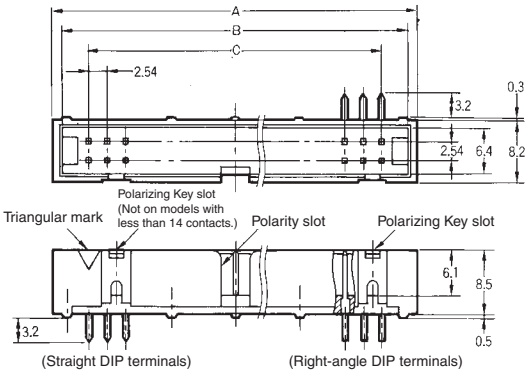
# XG4C Box-type Plugs

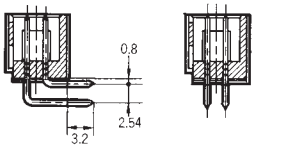
## ■ Dimensions

(Unit: mm)

**XG4C-□□31/-□□71**
**(With straight DIP terminals)**

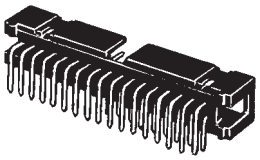


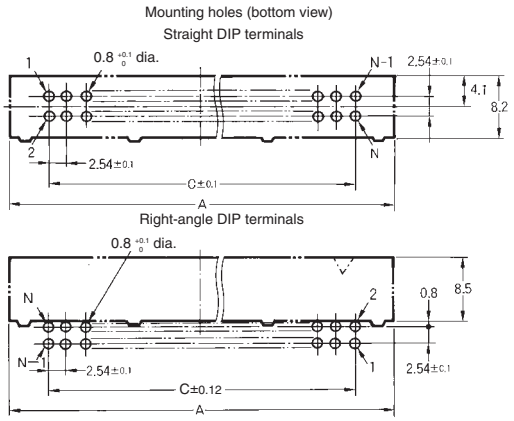



Right-angle DIP terminals  Straight DIP terminals

**XG4C-□□34/-□□74**
**(With right-angle DIP terminals)**



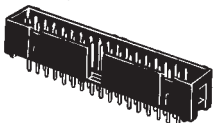
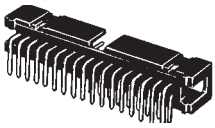



**Dimensions**

| No. of contacts | Dimensions (mm) | | |
|---|---|---|---|
| | A | B | C |
| 10 | 20.0 | 17.5 | 10.16 |
| 14 | 25.1 | 22.6 | 15.24 |
| 16 | 27.6 | 25.2 | 17.78 |
| 20 | 32.7 | 30.2 | 22.86 |
| 26 | 40.3 | 37.9 | 30.48 |
| 30 | 45.4 | 42.9 | 35.56 |
| 34 | 50.5 | 48.0 | 40.64 |
| 40 | 58.1 | 55.6 | 48.26 |
| 50 | 70.8 | 68.3 | 60.96 |
| 60 | 83.5 | 81.0 | 73.66 |
| 64 | 88.6 | 86.1 | 78.74 |

**Note:** See the following page for details on the availability (10-contact Connectors) and pitch (with 50, 60, or 64-contact Connectors) of polarity slots.

## ■ Ordering Information

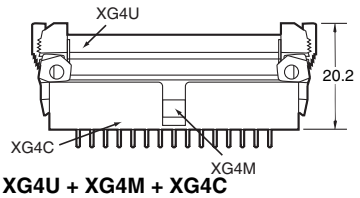
| No. of contacts | No. of polarizing slots | Plugs with straight DIP terminals  | Plugs with right-angle DIP terminals  |
|---|---|---|---|
| 10 | 0 | XG4C-1071 | XG4C-1074 |
| | 1 | XG4C-1031 | XG4C-1034 |
| 14 | 1 | XG4C-1431 | XG4C-1434 |
| 16 | 1 | XG4C-1631 | XG4C-1634 |
| 20 | 1 | XG4C-2031 | XG4C-2034 |
| 26 | 1 | XG4C-2631 | XG4C-2634 |
| 30 | 1 | XG4C-3031 | XG4C-3034 |
| 34 | 1 | XG4C-3431 | XG4C-3434 |
| 40 | 1 | XG4C-4031 | XG4C-4034 |
| 50 | 1 | XG4C-5031 | XG4C-5034 |
| | 2 (See note 1.) | XG4C-5071 | XG4C-5074 |
| 60 | 1 | XG4C-6031 | XG4C-6034 |
| | 2 (See note 1.) | XG4C-6071 | XG4C-6074 |
| 64 | 1 | XG4C-6431 | XG4C-6434 |
| | 2 (See note 1.) | XG4C-6471 | XG4C-6474 |

**Note: 1.** Polarizing slot pitch is 22.86 mm.

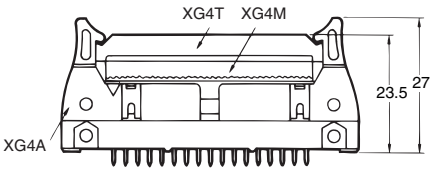
**2.** The Box-type Plug can be locked using Lock Lever II (sold separately). (See XG4Z-0002 on page 19.)

# ■ Mating Diagrams for XG4M

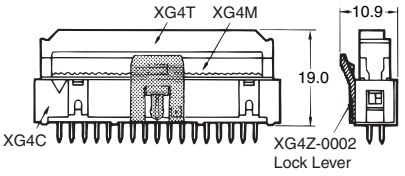
**XG4U + XG4M + XG4C**
**(With straight terminals)**



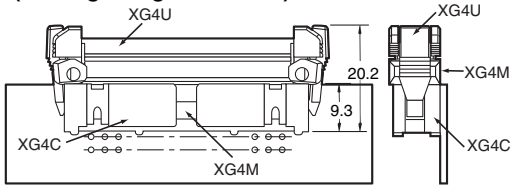

**XG4T + XG4M + XG4A**



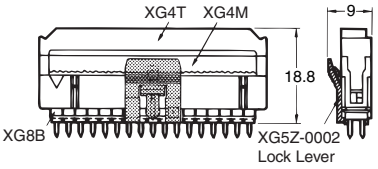

**XG4T + XG4M + XG4C + Lock Lever**



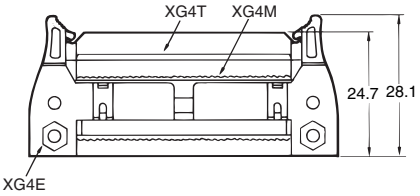

**XG4U + XG4M + XG4C**
**(With right-angle terminals)**



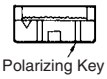
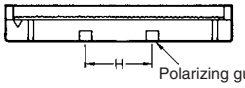
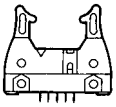
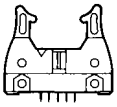
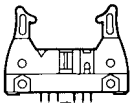
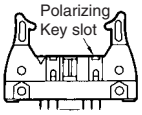
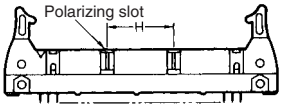
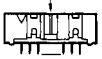
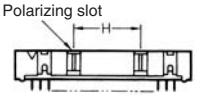

**XG4T + XG4M + XG8B (Original Plug) + Lock Lever**




**XG4T + XG4M + XG4E**




## ■ Polarity Slot and Polarizing Key Slot Number and Position

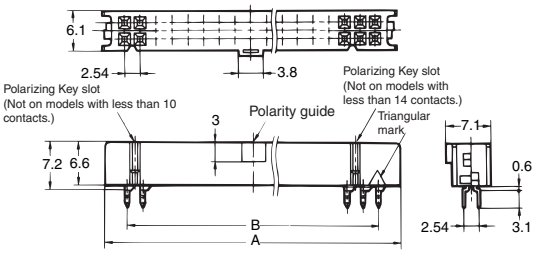
| Classification | No. of contacts | | | | |
|---|---|---|---|---|---|
| | 10 contacts | | 14 contacts | 16 to 40 contacts | 50 to 64 contacts |
| **XG4M MIL Sockets** | XG4M-1031 | XG4M-1030 | XG4M-1430 | XG4M-1630 to XG4M-6430  Polarizing Key slot | |
| | | | | --- | XG4M-5031, XG4M-6031, XG4M-6431  H Polarizing guide |
| **XG4A MIL Plugs XG4E IDC Plugs** | XG4A-107□  XG4E-107□ | XG4A-103□  XG4E-103□ | XG4A-143□  XG4E-143□ | XG4A-163□ to XG4A-643□ Polarizing Key slot  XG4E-163□ to XG4E-643□ | |
| | | | | --- | XG4A-507□, XG4A-607□, XG4A-647□ Polarizing slot H  XG4E-507□, XG4E-607□, XG4E-647□ |
| **XG4C Box-type Plugs** | XG4C-107□ | XG4C-103□ | XG4C-143□ | XG4C-163□ to XG4C-643□ Polarizing slot  | |
| | | | | --- | XG4C-507□, XG4C-607□, XG4C-647□ Polarizing slot H  |
| **No. of polarizing guides (Polarizing Slots)** | 0 | 1 | 1 | 1 | 1 / 2 (H = 22.86 mm) |
| **No. of Polarizing Key slot (Polarizing Key Slots)** | 1 | 0 | 1 | 2 | 2 |

# XG4H Board-to-Board Sockets

## ■ Dimensions

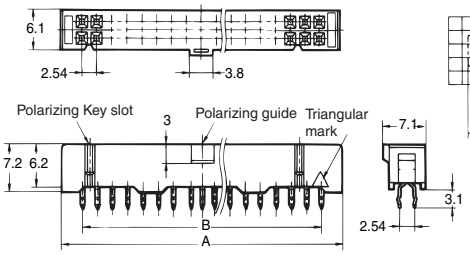
(Unit: mm)

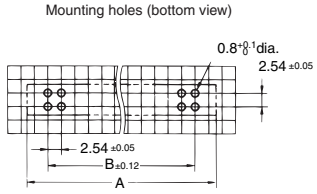
**XG4H-□□31/-□□71**
**(With straight DIP terminals)**



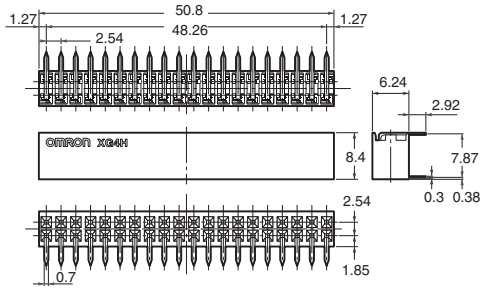

**XG4H-3431-1**
**XG4H-4031-1**
**(With straight DIP terminals)**

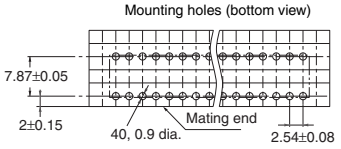
*Sockets with model numbers ending in -1 are available only with 34 or 40 contacts (provide kinked terminals and standoff to prevent the Sockets from falling over).




**XG4H-4034**
**(With right-angle DIP terminals)**




**Dimensions**

| No. of contacts | A | B |
|---|---|---|
| 10 | 17.3 | 10.16 |
| 14 | 22.3 | 15.24 |
| 16 | 24.9 | 17.78 |
| 20 | 30.0 | 22.86 |
| 26 | 37.6 | 30.48 |
| 30 | 42.7 | 35.56 |
| 34 | 47.7 | 40.64 |
| 40 | 55.4 | 48.26 |
| 50 | 68.1 | 60.96 |
| 60 | 80.8 | 73.66 |
| 64 | 85.8 | 78.74 |

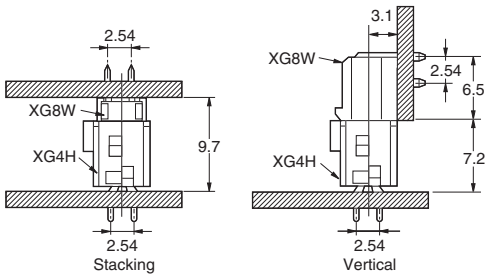
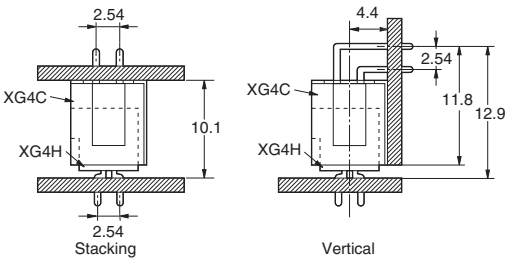
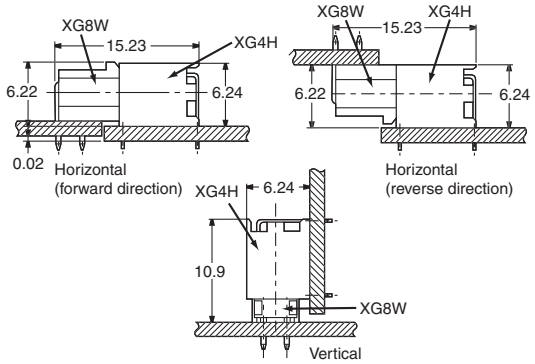
## ■ Ordering Information

| No. of contacts | No. of polarizing slots | Sockets with straight DIP terminals |
|---|---|---|
| 10 | 1 | XG4H-1031 |
| 14 | 1 | XG4H-1431 |
| 16 | 1 | XG4H-1631 |
| 20 | 1 | XG4H-2031 |
| 26 | 1 | XG4H-2631 |
| 30 | 1 | XG4H-3031 |
| 34 | 1 | XG4H-3431-1 |
| 40 | 1 | XG4H-4031-1 |
| 50 | 1 | XG4H-5031 |
| | 2 (See note.) | XG4H-5071 |
| 60 | 1 | XG4H-6031 |
| | 2 (See note.) | XG4H-6071 |
| 64 | 1 | XG4H-6431 |
| | 2 (See note.) | XG4H-6471 |

**Note:** Polarizing guide pitch is 22.86 mm.

| No. of contacts | Sockets with right-angle DIP terminals |
|---|---|
| 40 | XG4H-4034 |

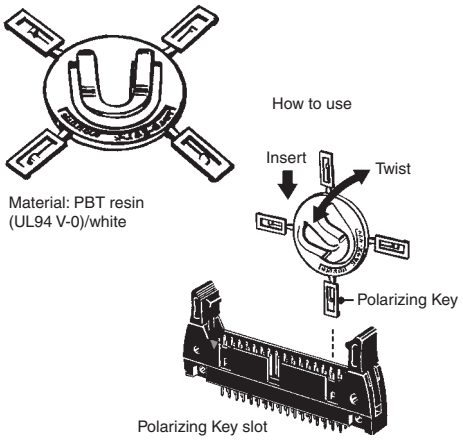
## ■ Mating Diagrams for XG4H

| Plug / Socket | XG8W Original Plugs | XG4C Box-type Plugs |
|---|---|---|
| **XG4H-□□31/-□□71 (With straight DIP terminals)** |  |  |
| **XG4H-4034 (With right-angle DIP terminals)** |  | --- |

# ■ Tools and Accessories (Sold Separately)

### XG4Z-0004 Polarizing Key

Polarity guides and slots can be used by themselves to help prevent reverse insertion. Use the Polarizing Key as well for best results.

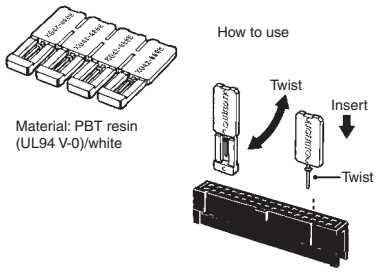



**Note:** Each XG4Z-0004 has 4 Polarizing Keys.

### XG4Z-0005 Coding Pin

(To prevent erroneous insertion)

The Coding Pin is used to prevent confusion when many Connectors with the same number of contacts are lined up. It can also be used to prevent reverse insertion when using Connectors without a shroud like the XG8 Unshrouded Plug. The Coding Pin can also be used with XC5, and XC6 DIN Connectors as well as with XG5 Discrete-wire IDC Connectors.

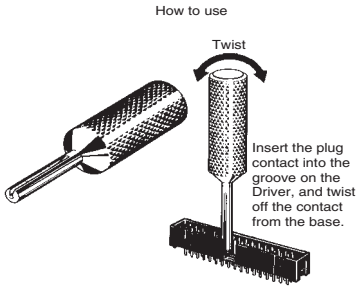



**Note: 1.** A contact with a Coding Pin inserted cannot be used.

**2.** Each XG4Z-0005 has 4 Polarizing Keys.

### XY2E-0002 Contact Cutting Driver

The Contact Cutting Driver is used to cut (twist off) a contact on the mating Plug when using an XG4Z-0005 Coding Pin.

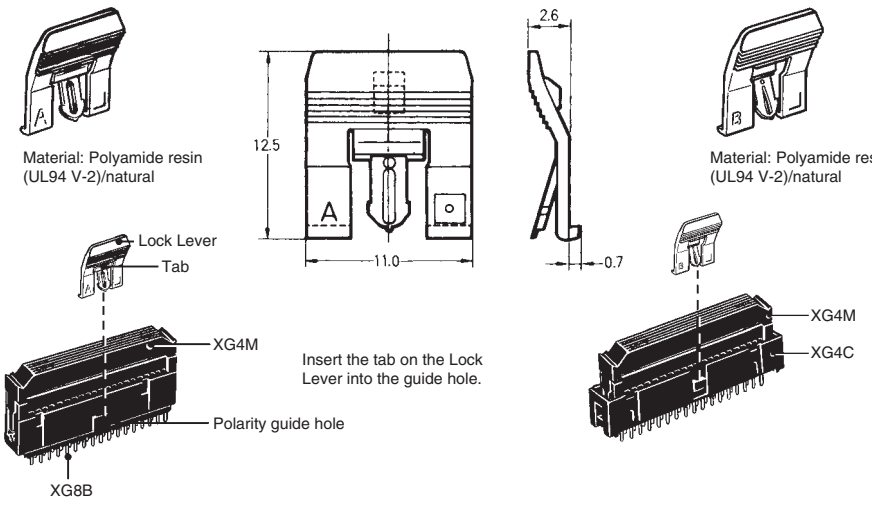



| Model |
|---|
| XG4Z-0004 |
| XG4Z-0005 |
| XY2E-0002 |

### Lock Lever for XG8B and XG8W Plugs (With Right-angle Terminals)

**XG5Z-0002**

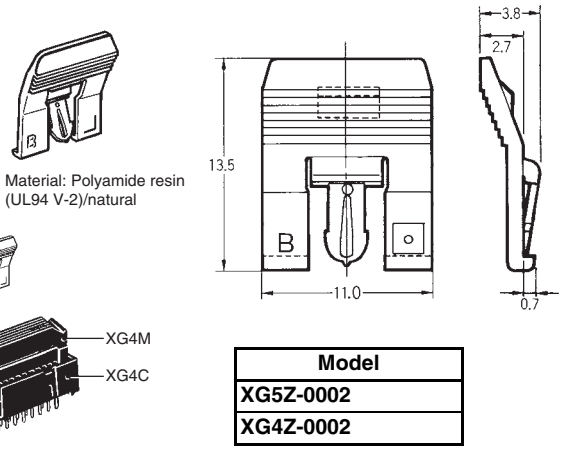
Use to lock Unshrouded Plugs (for XG8B and XG8W Plugs with right-angle terminals).




### Lock Lever II for XG4C Plugs

**XG4Z-0002**

Use to lock XG4C Box-type Plugs.




| Model |
|---|
| XG5Z-0002 |
| XG4Z-0002 |

# ■ Precautions

## Correct Use

**• Automated Soldering Conditions (Jet Flow)**

**1.** Soldering temperature: 250 ±5°C

**2.** Continuous soldering time: Within 5±1 s

**• Soldering**

Solder-mount the XG4A with the lock levers fully closed or fully open.

Solder-mounting the XG4A with the lock lever half-open may cause play in lock lever due to thermal deformation of the housing.

**• Storage**

If the lock levers of the XG4A or XG4E connector are left at an intermediate position for a long time, they may get to feel loose in operation due to deterioration of the plastic part. When the lock levers are not used, store the plug with the lock levers fully closed or fully open.

- Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
- Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

**Note: Do not use this document to operate the Unit.**

**OMRON Corporation**
**Electronic and Mechanical Components Company**
**Contact: www.omron.com/ecb**

**Cat. No. G039-E1-03**
0816(0412)(O)

# Mouser Electronics

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Omron:

XG4A-3031 XG4A-1431 XG4A-1631 XG4A-2039-A XG4A-3431 XG4A-4032 XG4A-4034 XG4A-5039-A XG4A-1031 XG4A-1035 XG4A-1634 XG4A-1639-A XG4A-2031 XG4A-2032 XG4A-2034 XG4A-2631 XG4A-3034 XG4A-3432 XG4A-3434 XG4A-4031 XG4A-5034 XG4A-5071 XG4A-5072 XG4A-6074 XG4A-6474 XG4A-1034 XG4A-1039-A XG4A-1434 XG4A-1439-A XG4A-2634 XG4A-2639-A XG4A-3039-A XG4A-3439-A XG4A-4039-A XG4A-5031 XG4A-6031 XG4A-6034 XG4A-6039-A XG4A-6431 XG4A-6434 XG4A-6439-A XG4A-1032 XG4A-1071 XG4A-1072 XG4A-1074 XG4A-1075 XG4A-1079-A XG4A-1432 XG4A-1435 XG4A-1632 XG4A-1635 XG4A-2035 XG4A-2632 XG4A-2635 XG4A-3032 XG4A-3035 XG4A-3435 XG4A-4035 XG4A-5032 XG4A-5035 XG4A-5074 XG4A-5075 XG4A-5079-A XG4A-6032 XG4A-6035 XG4A-6071 XG4A-6072 XG4A-6075 XG4A-6079-A XG4A-6432 XG4A-6435 XG4A-6471 XG4A-6472 XG4A-6475 XG4A-6479-A XG4A-2036 XG4A-4033

Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

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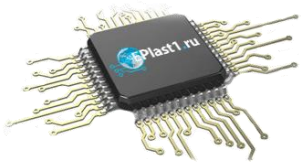
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

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**Факс:** 8 (812) 320-02-42
**Электронная почта:** org@eplast1.ru
**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.